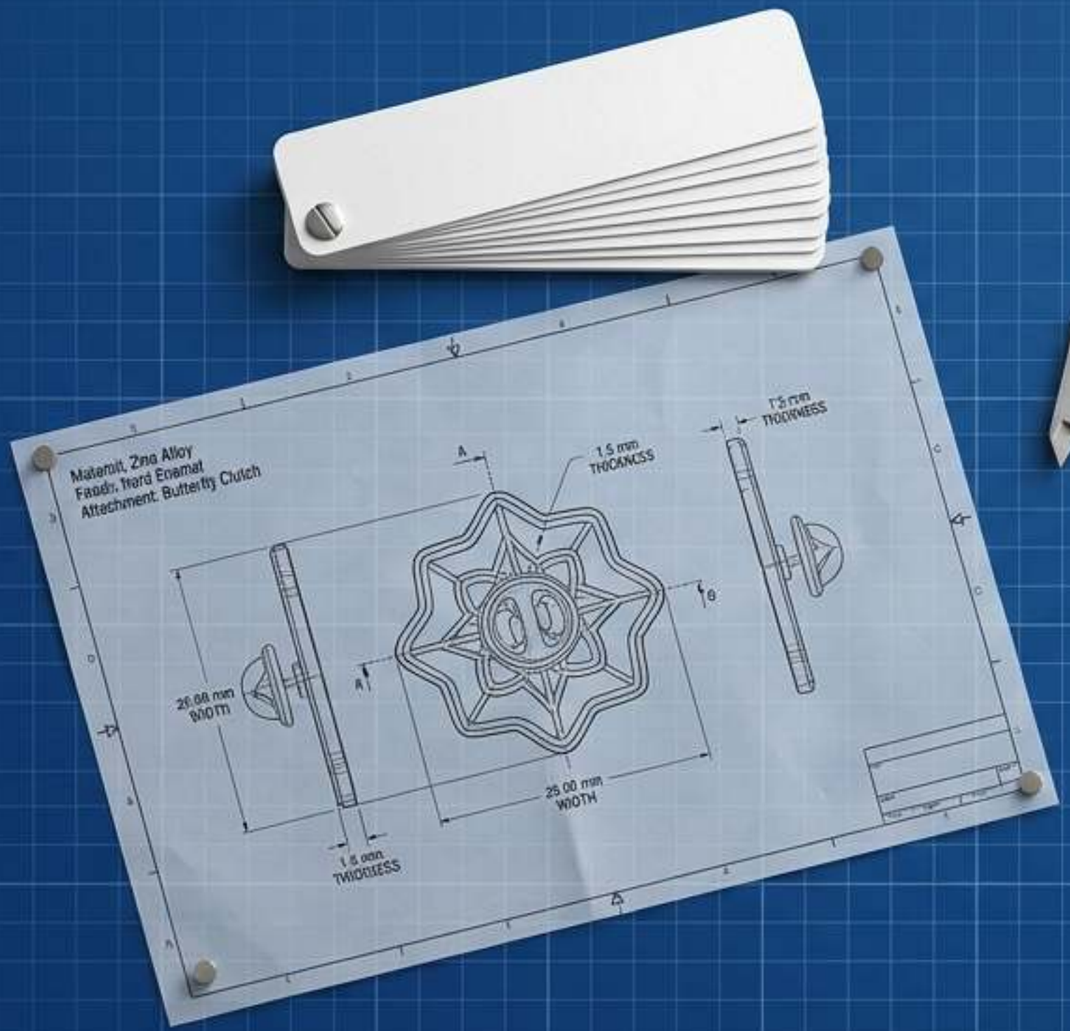
Specifying Custom Hard Enamel Pins as a Controlled Manufacturing Project





ZIGPAC Official Buyer Guide

Product: Custom Hard Enamel Pins

Formal SKU: ZPCP0002

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Digital illustrations fail without physical manufacturing translation

The Translation Metaphor

Digital RGB Screen View



Physical Metal Reality



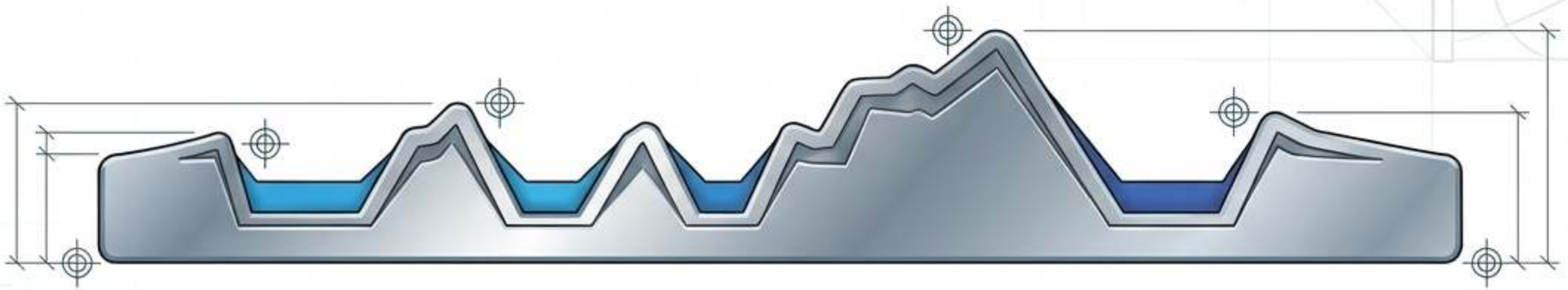
A perfect screen rendering means nothing on the factory floor. When artwork moves to metal, narrow gaps close, nearby colors merge, and polished surfaces erase delicate details. Discovering these failures after mold production ruins tooling costs, launch dates, and inventory economics.

Hard enamel is defined by a level, polished surface construction

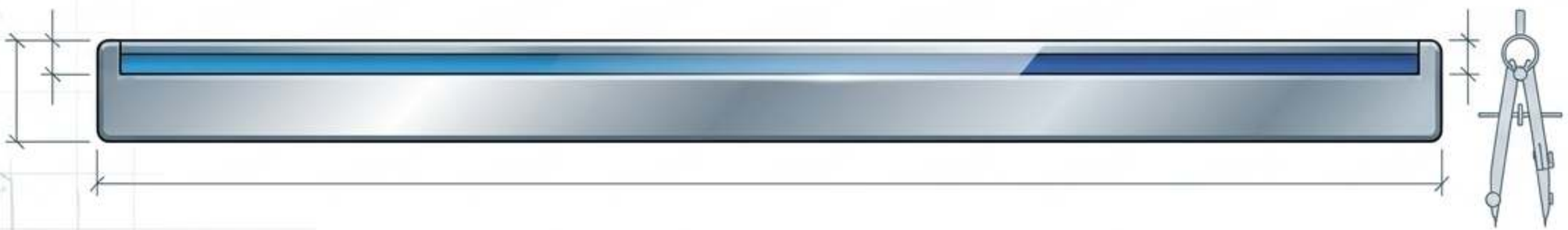
The word “hard” describes the finished construction—a metal badge where colored areas are filled and buffed until they sit flush with surrounding metal lines. It does not provide a universal material or lifespan guarantee. Commercial bodies use iron, brass, copper, or zinc-alloy.

The Elevation Cross-Section

Soft Enamel



Hard Enamel



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Match the manufacturing process to the artwork and business model

The Process Matrix				
Process: Hard Enamel 	**Surface:** Level, polished, reflective	**Use Case:** Corporate identity, premium retail	**Constraint:** Polishing reduces tiny details	**Cost Question:** Are extra plating/sample costs included?
Process: Soft Enamel 	**Surface:** Raised metal, recessed color	**Use Case:** Textured artwork, promo runs	**Constraint:** Recessed face shows wear differently	**Cost Question:** Is epoxy optional or included?
Process: Die-Struck 	**Surface:** Metal-only relief	**Use Case:** Formal, heritage awards	**Constraint:** No colored enamel cells	**Cost Question:** How do antique finishes affect price?
Process: Printed / UV 	**Surface:** Flat graphic reproduction	**Use Case:** Gradients, photographs	**Constraint:** Durability depends on construction	**Cost Question:** What abrasion evidence exists?
Process: Hard Enamel + Print 	**Surface:** Polished base with print	**Use Case:** Complex premium artwork	**Constraint:** Registration adds inspection points	**Cost Question:** Are reject allowances itemized?

Separate the visual design from the metal construction

The Anatomy of a Spec



Comport metal mail: to be detailed with metallic sheet veid, and repnsent plating underlayer.

A complete specification prevents the artwork, sales quote, and production proof from becoming three conflicting sources of truth.

Every color region, raised metal line, cutout, engraved mark, and printed overlay must be individually identified and separated from the underlying metal construction.

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Lock physical dimensions to eliminate visual assumptions



Retail Reference Data

Product:
Pinsanity Black Knight

Verified Dimensions:
1.35 inches tall | 2 mm thick

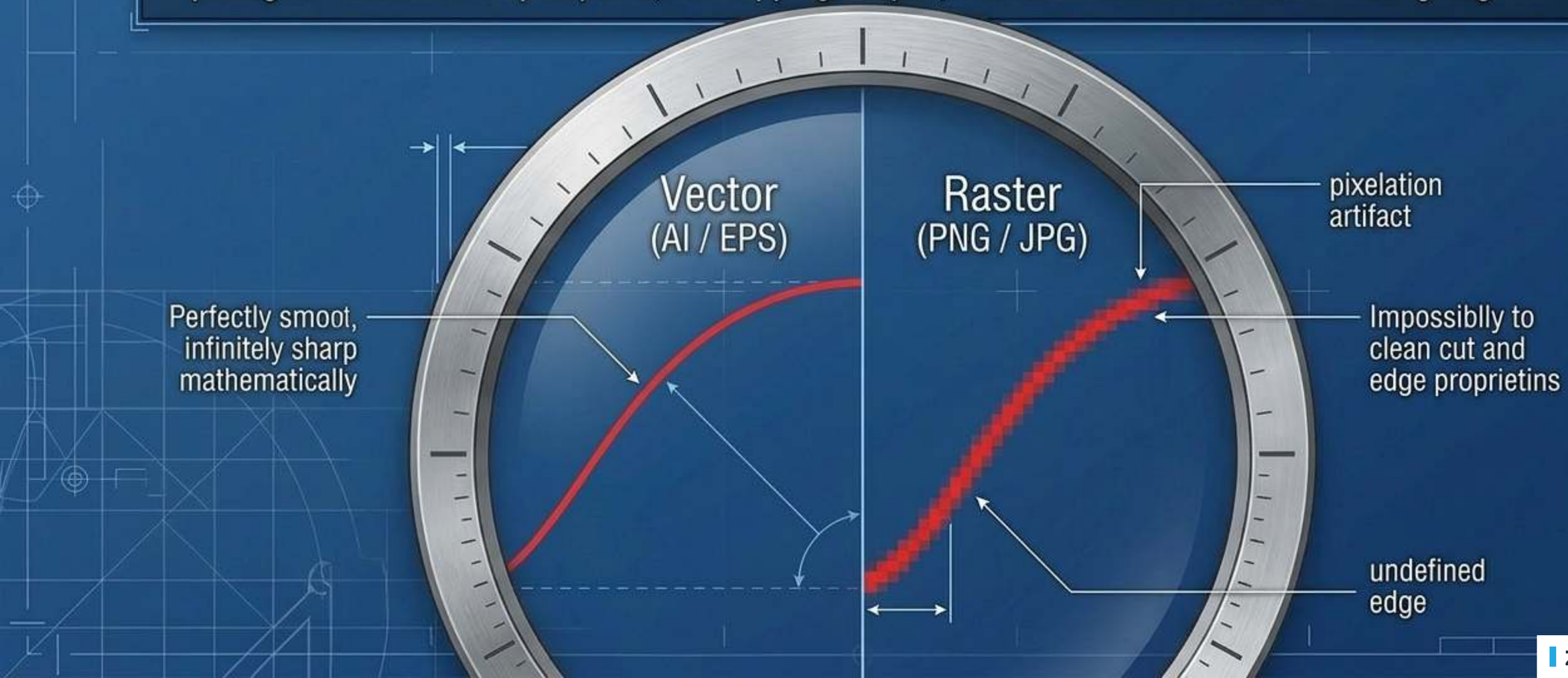
Consumer Reception:
4.9-star rating (1,988 reviews)

State width and height in millimeters and inches, designate which dimension controls the scale, and mandate a finished-thickness value. Identify the front orientation to prevent attachments from being placed at an unstable balance point. Concrete dimensions improve buyer confidence far more than generic claims of “premium quality”.

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Factory tooling requires scalable, math-based vector paths

Submit editable production files (AI, EPS, or PDF) with outlined fonts and separated color regions. Vectors can be resized without introducing pixelation, making them essential for cutting metal molds. A preflight must resolve open paths, overlapping shapes, and isolated islands before tooling begins.



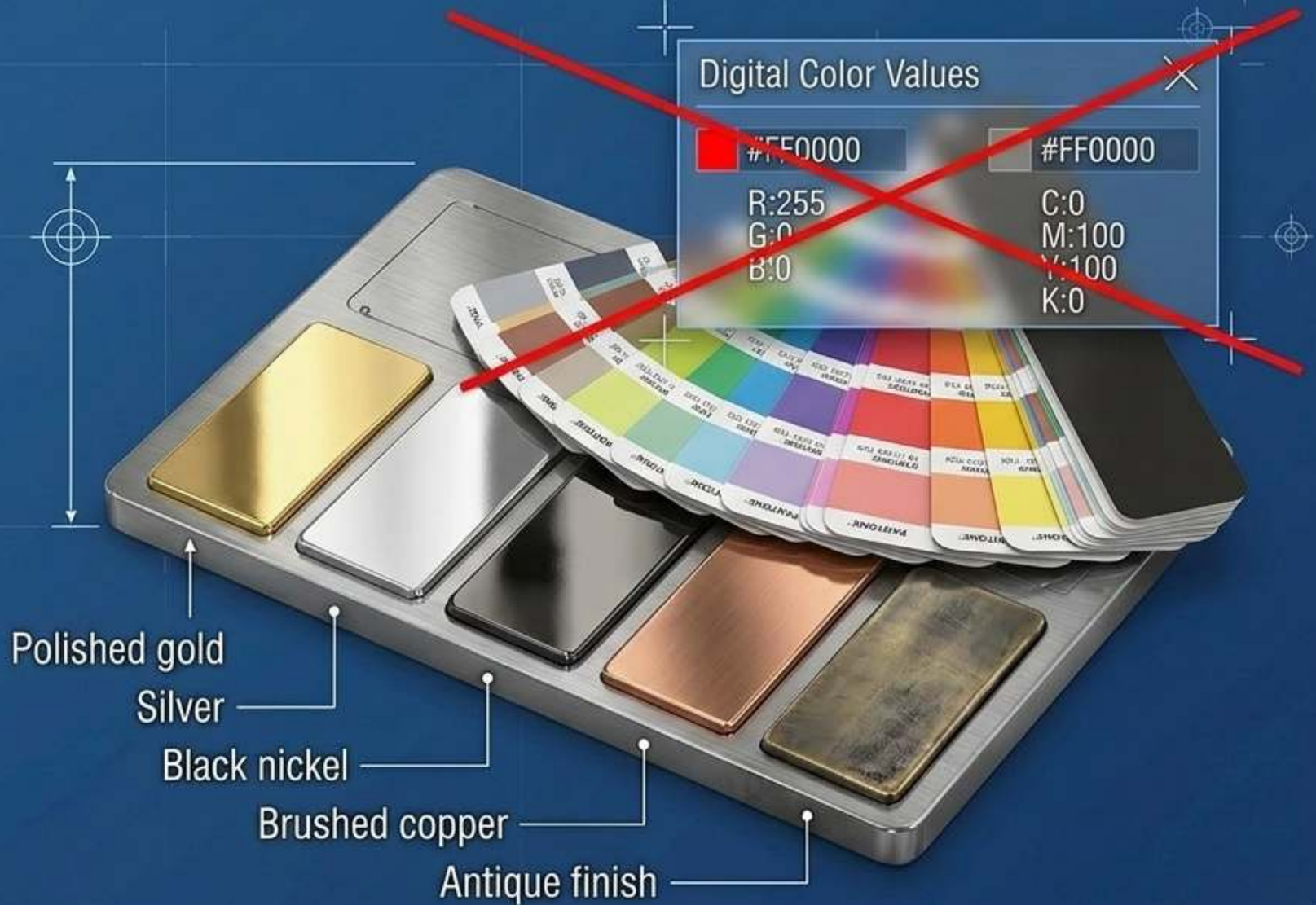
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Define color and plating with physical production references

Digital RGB screen values do not guarantee the same appearance in cured enamel.

Specify a named physical color reference.

The final appearance depends entirely on the specific combination of base metal, underlayers, plating, and polishing—not merely a color name on a screen.



Base the attachment mechanism on physical use-case and safety

The Attachment Selection Guide			
	PVC / Rubber Clutch	Comfortable, lightweight	Check retention on actual post
	Metal Butterfly	Traditional, compact	Inspect spring action and burrs
	Locking Clutch	High resistance to removal	Confirm release operation thickness
	Magnet	Avoids piercing garments	Evaluate holding force vs garment thickness
	Two-Post	Reduces rotation on large designs	Verify spacing against backing card

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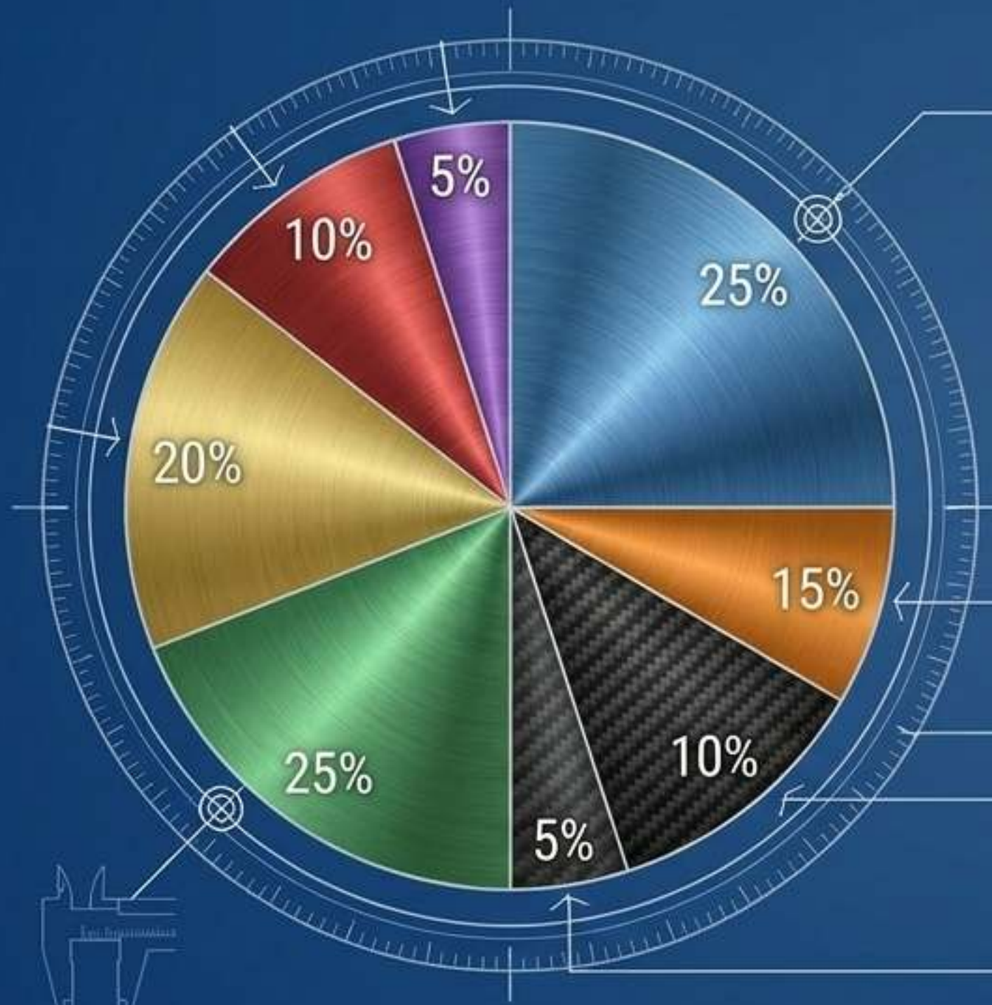
Purchasing factory capacity does not grant reproduction rights



Establish clear artwork ownership before engaging a supplier. Use original work, documented commissioned rights, licensed material, or public domain content. The copyright owner strictly controls the reproduction, distribution, and preparation of derivative works. Factory manufacturing capabilities do not override intellectual property laws.

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Evaluate suppliers using a weighted, evidence-based scorecard

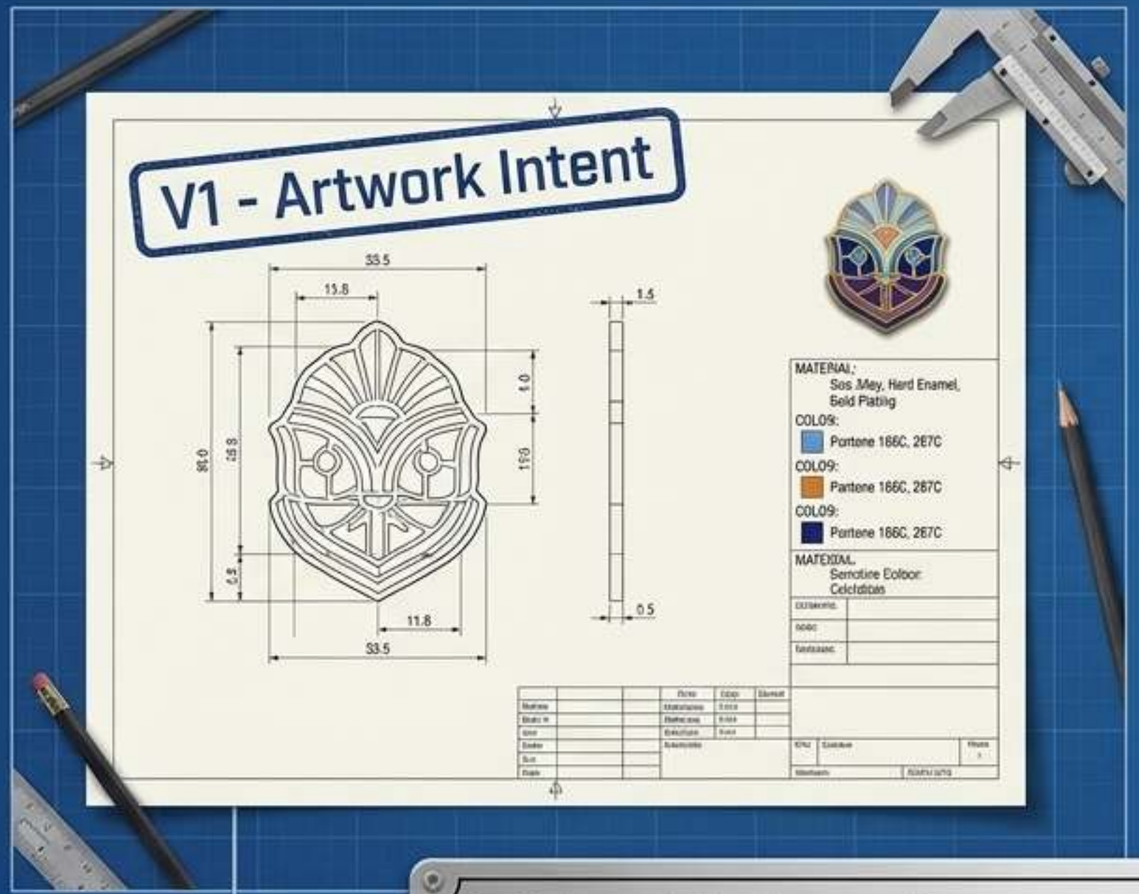


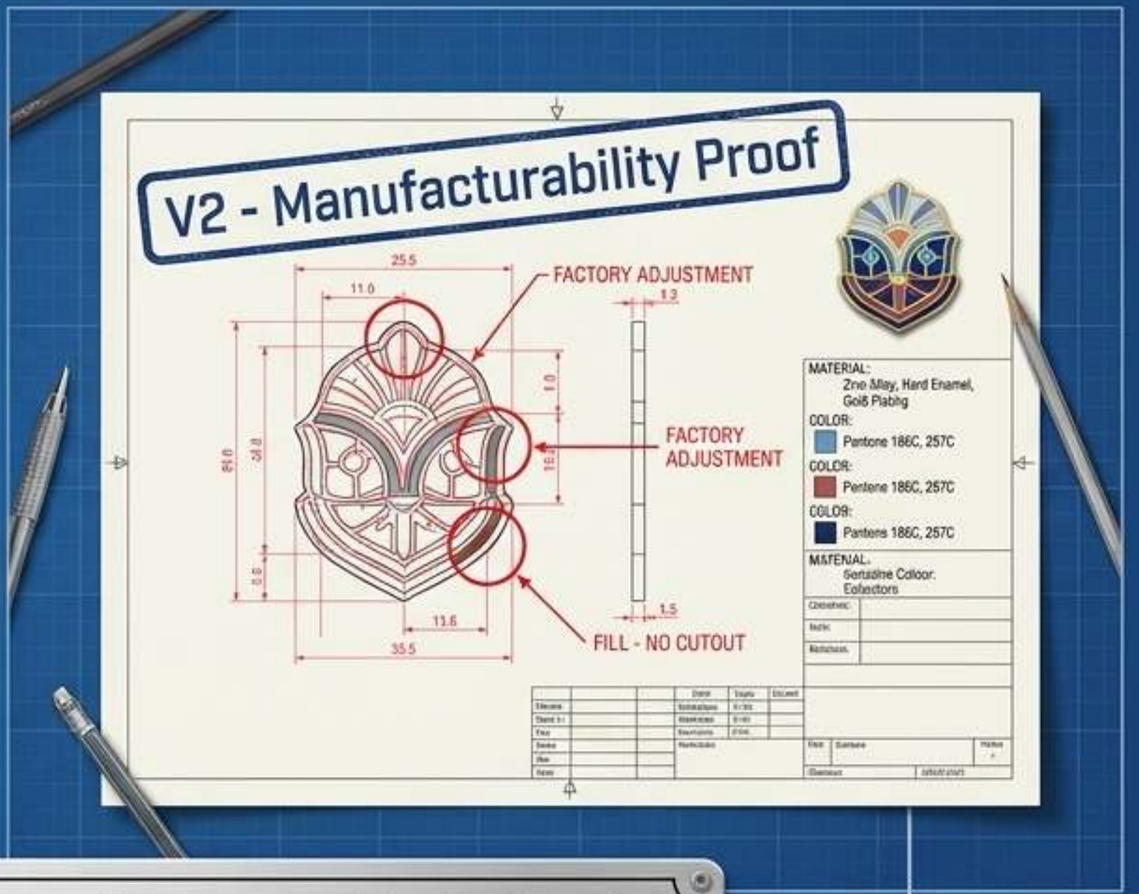
The Weighted Supplier Scorecard

- **25% — Manufacturability**
  Evidence: Marked proof, version control
- **25% — Quality System**
  Evidence: Acceptance rules, remedy window
- **20% — Landed Price Transparency**
  Evidence: Itemized quote, Incoterms
- **15% — Delivery Confidence**
  Evidence: Milestone schedule
- **10% — Compliance**
  Evidence: Traceable material documentation
- **5% — Communication**
  Evidence: Written approvals

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Treat the production proof as a binding manufacturing document

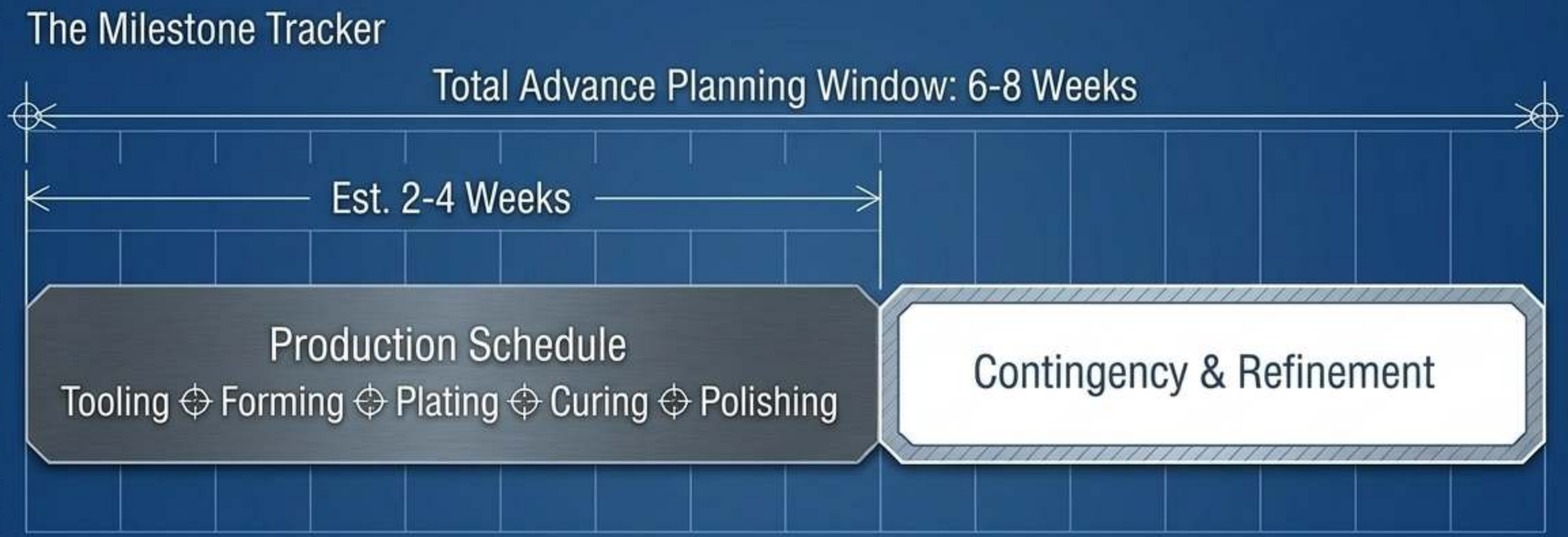




An informal “looks good” message creates dangerous ambiguity. Require the supplier to explicitly identify every change made for manufacturability. Confirm dimensions, metal-line treatments, fill colors, and cutouts. Approve the document strictly by version number and date so an obsolete file never reaches the tooling stage.

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Manage the critical path from final proof, not initial inquiry



Schedule tracking begins only when the final proof is approved.
Track tooling release, bulk completion, inspection, and dispatch as distinct milestones.
A rush promise is only valuable if it identifies exactly which stage is being compressed.

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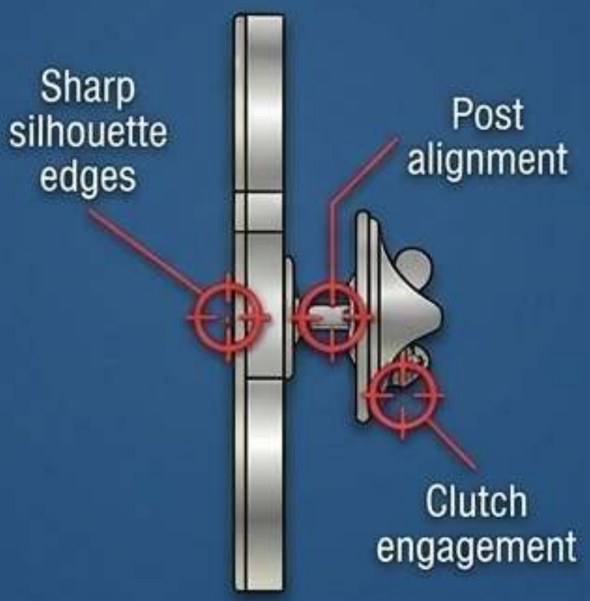
Replace subjective ‘high quality’ with a strict defect catalogue

The Defect Catalogue

Front Face



Construction / Side



Back / Packaging



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Compliance obligations shift entirely based on the intended user



Pathway: Adult Collectible

No specific CPSC children's testing required.



Pathway:
Children's Product

CPSC STRICT LIMITS:
100 ppm Total Lead Limit
90 ppm Surface Coating Limit

An adult collectible and a product marketed for children do not share regulatory obligations. A generic factory 'lead-free' statement without a matching, traceable laboratory test identity does not demonstrate compliance for your ordered construction.

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The lowest factory unit price is rarely the true economic cost

Calculate the cost per sellable unit by incorporating every step required to land the product in your inventory.

A low minimum order claim (e.g., 25 units per design) does not eliminate heavy setup costs or landed-cost exposure.



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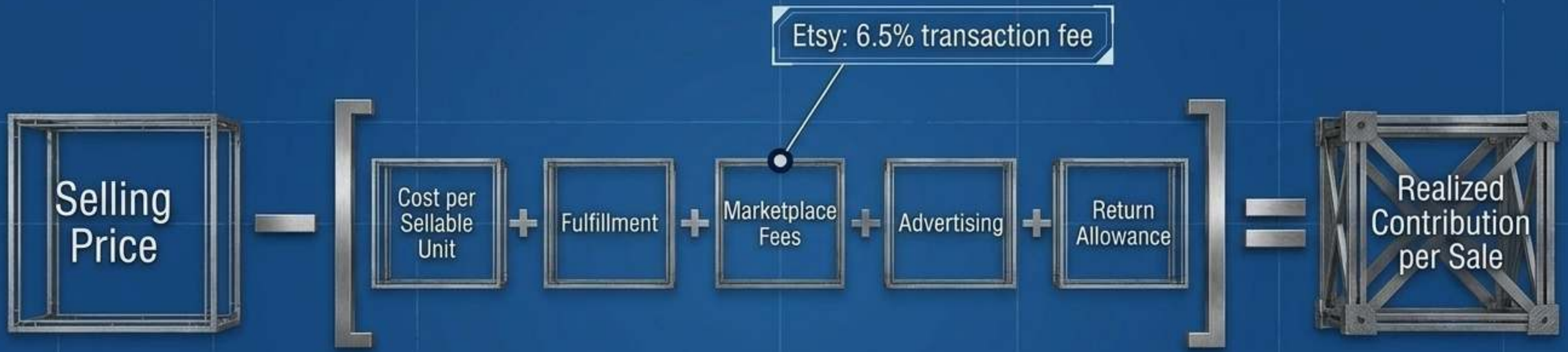
Make delivery responsibility and tariff classifications explicit



Record exact Incoterms 2020 rules in the purchase order. DAP and DDP are not interchangeable—know exactly who acts as the importer, clears customs, and pays the duty. Never assign a tariff code from visual appearance alone; final classification depends on base material, construction, and function.

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Deduct marketplace channel costs before approving the order quantity



A hypothetical $12 sale with a $2 factory cost does not equal an 83% profit margin. Official platform fees, payment processing, advertising, and fulfillment can materially reduce the contribution. Model at least three outcomes: planned velocity, slower sell-through with discounting, and a high-defect scenario.

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Convert scattered variables into a unified, quote-ready brief



A successful custom enamel pin order begins long before tooling. By separating the order into exact specifications, timelines, quality thresholds, and total landed costs, you realize that a promotional quote is meaningless without all these variables locked together into one definitive product record.

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Design the reorder mechanics before the first shipment arrives

A definitive product record prevents the next production run from relying on memory. Log the accepted quantity, defect categories, and sell-through rate. Ask the supplier how long the physical mold will be retained. This data
reveals whether a lower quoted reorder price is secretly being offset by color drift or cheaper replacement components.

- [x] Approved Physical Sample
- [x] Tooling Identity & Retention Period
- [x] Pantone Color References
- [x] Base Metal & Plating Formula
- [x] Final Inspection & Defect Results

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